

REMARKS

The application has been amended and is believed to be in condition for allowance.

There are no formal matters outstanding.

Claims 2-4, 7-10, 15 and 19-22 have been allowed.

Claims 14 and 23 are indicated to be directed to allowable subject matter.

Claims 12 and 13 were rejected as obvious over KOBACHI 6,060,337 in view of JP 09-83013 and KITANISHI 5,214,495.

Claims 12 and 13 are both believed to be non-obvious.

In the present invention as recited by claim 12, the semiconductor device comprises one of the pair of element loading portions being unbent.

This structure shortens the heat releasing or dissipating path through the lead. This shortening in turn results in improved heat dissipating characteristics for the heat-generating elements.

Further, since the unbent element is positioned below the bent element loading portion, the deformation of the frame due to the bending during lead forming is lessened so as to manufacture the device with increased ease of manufacture and reliability.

These teachings are not in the applied art.

KOBACHI discloses a photoreflector detector configured such that a light emitting element and a light receiving element

are disposed adjacent to or in contact with each other. Notice the small vertical separation in Figure 13.

Claim 12 requires a photocoupler comprising a light-emitting element and a light-sensitive element that face each other.

KOBACHI does not disclose a photocoupler comprising a light-emitting element and a light-sensitive element that face each other. See Figure 12 showing the light-emitting element and the light-sensitive element both facing upward toward element 211.

To modify KOBACHI so that these upper light-sensitive elements 212A, 212D would face down results in KOBACHI being inoperative for its intended purpose. KOBACHI cannot be reconfigured to have facing elements and still operate as a reflector detector. Therefore, one of skill would not modify KOBACHI so that these upper light-sensitive elements would face down.

As per claim 13, the invention provides that the light-emitting element is loaded on the unbent element loading portion within said light-transmitting resin.

KOBACHI also does not make this disclosure.

JP 09-83013 merely discloses a light emitting element and a light receiving element disposed apart from each other by bending the upper lead in a conventional manner. Note that both element loading portions are bent.

Therefore, JP 09-83013 does not satisfy the recitation of "wherein one of said pair of element loading portions is an unbent element loading portion unbent within the light-transmitting resin."

There is no motivation to modify JP 09-83013 as recited.

KITANISHI is a specific type of photointerrupter which has specific physical requirements, i.e., a passage 9 between the light-emitting element and the light-receiving element.

Also see that each of the light-emitting element and the light-receiving element are in different light transmitting resins.

Although it is true that the light-emitting element and the light-receiving element face each other and are on unbent element loading portions (with each light-transmitting resin), there is no teaching that motivates modifying either of KOBACHI and JP 09-83013.

The mere fact that certain recited elements of the claims are in the prior art is insufficient to render the claims obvious.

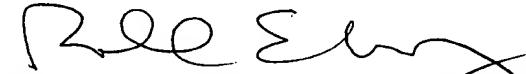
Reconsideration and allowance of claim 12, as well as its dependent claims, are respectfully requested.

It is requested that the undersigned attorney be contacted should there be any further matters that prevent the case from being deemed to be in condition for allowance.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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